

Notice of Allowability

Application No.

10/067,075

Examiner

David C. Meyer

Applicant(s)

OMI, TOSHIHIRO

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed February 4, 2002.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ The drawings filed on 06 March 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 0202
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. The formal drawings submitted on March 13, 2004 have been considered and are accepted by the examiner.
2. The preliminary amendment filed on February 4, 2002 has been considered and is accepted by the examiner.
3. Claims 1-6 are allowed. The following is an examiner's statement of reasons for allowance: The prior art of record includes light-emitting devices used in conjunction with optical encoder devices, the light-emitting devices employing resin-enclosed light-emitting chips. For example, Omi (US 5,841,133) discloses an optical encoder comprising a resin-enclosed light-emitting chip 23. A reflecting surface 26 and concave mirror 25 are provided to direct light from the light-emitting chip toward an optical grating. Omi does not disclose several of the limitations recited in independent claim 1, including that the light-emitting surface of the light-emitting chip is oriented orthogonally with respect to the surface of the optical grating; and that a first optical element included in the resin reflects light from the light-emitting chip parallel to the optical grating surface and orthogonal to the direction of the optical grating. No other prior art reference included in the record discloses or suggests these features. Therefore, the prior art of record does not disclose the invention as claimed, wherein in addition to the other claimed features, the light-emitting chip has a light-emitting surface oriented orthogonally with respect to the surface of the optical grating; the first optical element

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included with the transparent resin reflects light parallel to the optical grating surface and orthogonal to the optical grating direction.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Omi (US 5,995,229), Omi (US 6,410,911), Kabaya (US 4,499,374), and Shimomura (US 5,479,010) disclose optical encoder devices comprising resin-enclosed light-emitting chips. Böbel (US 6,240,652) discloses an optical position detection device wherein a light source emits light that is redirected toward a grating surface by an optical element.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Meyer whose telephone number is 571-272-2442. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for


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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DCM
March 3, 2004



DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800